

Pencoote of the East India House, under whose directions that ship was fitted out; and it is to the great pains taken by Mr. Sims in placing the magnets employed for counteracting the local attraction that the author attributes the undeviating accuracy of those compasses during the whole time the *Pluto* was under his command in both hemispheres. He observes that, in the first place, much care is required in securing the magnets, and protecting them from wet, after their proper position has been ascertained. In the case of the *Pluto*, two magnets were placed under the deck in the author's cabin; one of them eighteen inches below the deck, being, it is true, an eyesore, but one of trifling consideration, when compared with the great importance of the well-working of the compass. The next point to be attended to is that the cards, or needles, should be all of the same size, and exactly corresponding with that of the compass used at the placing of the magnets for counteracting the local attraction. The bittacles should all be of the same make and height, and the compass-boxes of the same size; so that whenever a new compass or a fresh bittacle is wanted, the circle in which the needle moves may remain at the same angle from the magnet as at the first adjustment. On a strict attention to these precautions will depend the well-working of the compass in all iron vessels, and also in wooden vessels whenever the quantity of iron they contain creates the necessity of measures being taken for counteracting local attraction.

It has been alleged that the adjustments for local attraction made in northern latitudes are not correct when the ship is south of the equator; but the author states that, in the *Pluto*, he observed no difference; that ship having made, while under his command, passages of many thousand miles, comprising 94 degrees of latitude, namely from 51° North to 43° South, and 153 degrees of longitude, namely from 30° West to 123° East, during the whole of which he never found any other correction for the compasses necessary excepting that required for the magnetic variation, the local attraction having been completely neutralized.

A diagram is subjoined, showing the positions of the compensating magnets with relation to the compass.

“Practical Remarks on Annealing Flint-Glass.” By Apsley Pellat, Esq., of the Falcon Glass Works, Holland Street. Communicated by Joshua Field, Esq., F.R.S.

This paper is entirely occupied with practical details relating to the art of annealing flint-glass and depriving it of colour, the author stating that he leaves the rationale of these facts to be explained by philosophers. He thinks, however, that they are reconcileable with the theory of Scheele, as explained by Bergman, and detailed by Murray in his work on Chemistry.